

# EUROPEAN PATENT OFFICE

## Patent Abstracts of Japan

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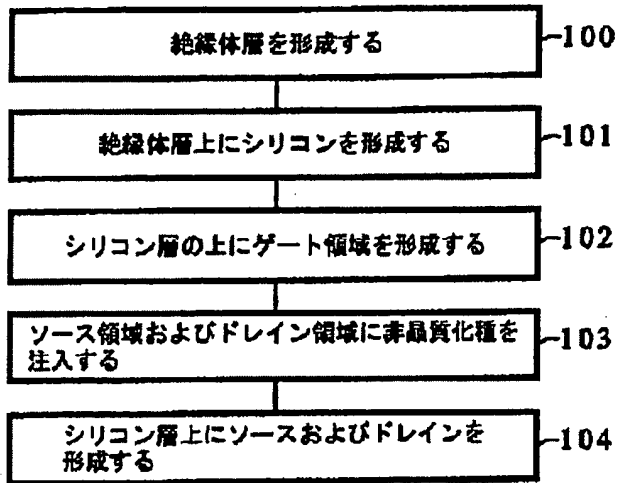
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APPLICANT : INTERNATL BUSINESS MACH CORP  
<IBM>;

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TITLE : COMPLETELY AMORPHOUS  
SOURCE/DRAIN FOR WET JUNCTION



**ABSTRACT :** PROBLEM TO BE SOLVED: To provide a method for forming a semiconductor device having an SOI structure operating by improved performance compared to a conventional SOI device, by forming a junction leaking path which consistently and effectively diffuses a main body charge during the operation of the device in the source area and the drain area of SOI structure.

**SOLUTION:** The semiconductor device of SOI structure has a source area and a drain area, which are formed by injecting silicon or germanium ions in a silicon layer and which are made to be amorphous. The completely amorphous source area and the drain area, bring permanent crystal defects and diffuse a charge in a device main body. Thus, the leak of a p-n junction improving the whole efficiency and performance of the device is generated.

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